

LISTING OF CLAIMS

1. (Previously Presented) A device for processing a sequence of information packets, comprising:

- a packets memory organized as a stack,
- means for stowing away the packets of the sequence in association with respective processing labels,
- a plurality of processing modules,
- at least one labels translation table,
- means for extracting packets from the packets memory, and
- supervisory means for receiving the processing label associated with each packet extracted from the packets memory and activating one of the processing modules selected as a function of the label received, the activated module being arranged to perform an elementary processing of the extracted packet,

whereby the elementary processing performed by at least one of the processing modules comprises associating the extracted packet with a label modified in accordance with a labels translation table, the processed packet subsequently being stowed away again in the packets memory in association with the modified label.

2. (Previously Presented) A device according to claim 1, wherein a first processing label is associated initially with each packet of the sequence, wherein the supervisory means are arranged to activate a filtering module forming part of

the plurality of processing modules in response to the receipt of the first processing label, and wherein the elementary processing performed by the filtering module comprises analyzing a header of the packet extracted and associating the packet with a second processing label dependent on a result of the analysis.

3. (Previously Presented) A device according to claim 1, wherein the plurality of processing modules comprises an output module for transmitting the extracted packet to an output of the device, with a signature based on a secret shared with a concentrating router of a telecommunication network, authenticating that the packet has been subjected to the processing operations performed by the device.

4. (Previously Presented) A method of processing a sequence of information packets, comprising the steps of:

stowing away the packets of the sequence in a packets memory organized as a stack, in association with respective processing labels, and examining the processing label associated with a packet extracted from the packets memory so as to activate a processing module selected as a function of the label received from among an assembly a plurality of processing modules, whereby the activated module performs an elementary processing of the packet extracted,

wherein the elementary processing performed by at least one of the processing modules comprises associating the extracted packet with a label modified in accordance with a labels translation table, the processed packet subsequently being stowed away again in the packets memory in association with the modified label.

5. (Previously Presented) A method according to claim 4, wherein, after having been subjected to various elementary processing operations, each packet is delivered with a signature based on a secret shared with a concentrating router of a telecommunication network, authenticating that the packet has been subjected to said elementary processing operations.

6(New). A device for processing a sequence of information packets, comprising:

- a packets memory organized as a stack,
- means for stowing away the packets of the sequence in association with respective processing labels,
- a plurality of processing modules,
- at least one labels translation table,
- means for extracting packets from the packets memory, and
- supervisory means for receiving the processing label associated with each packet extracted from the packets memory and activating one of the processing modules selected as a function of the label received, the activated

module being arranged to perform an elementary processing of the extracted packet,

wherein the elementary processing performed by at least one of the processing modules comprises associating the extracted packet with a label modified in accordance with a labels translation table, the processed packet subsequently being stowed away again in the packets memory in association with the modified label,

wherein a first processing label is associated initially with each packet of the sequence, wherein the supervisory means are arranged to activate a filtering module forming part of the plurality of processing modules in response to the receipt of the first processing label, and wherein the elementary processing performed by the filtering module comprises analyzing a header of the packet extracted and associating the packet with a second processing label dependent on a result of the analysis.

7. (New) A device according to claim 6, wherein the plurality of processing modules comprises an output module for transmitting the extracted packet to an output of the device, with a signature based on a secret shared with a concentrating router of a telecommunication network, authenticating that the packet has been subjected to the processing operations performed by the device.

8. (New) A method of processing a sequence of information packets, comprising the steps of:

stowing away the packets of the sequence in a packets memory organized as a stack, in association with respective processing labels, and examining the processing label associated with a packet extracted from the packets memory so as to activate a processing module selected as a function of the label received from among an assembly a plurality of processing modules, whereby the activated module performs an elementary processing of the packet extracted,

wherein the elementary processing performed by at least one of the processing modules comprises associating the extracted packet with a label modified in accordance with a labels translation table, the processed packet subsequently being stowed away again in the packets memory in association with the modified label, and

wherein, after having been subjected to various elementary processing operations, each packet is delivered with a signature based on a secret shared with a concentrating router of a telecommunication network, authenticating that the packet has been subjected to said elementary processing operations.